Direct Laryngoscopic Views Depending On Different Head And Neck Positions In Edentulous Patients

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Introduction

• Proper head and neck positioning is an important factor for successful direct laryngoscopy, and the optimum head and neck position in edentulous patients is unclear.

Aims

• Comparing direct laryngoscopic views in simple head extension, sniffing, and elevated sniffing positions in edentulous patients

Method

• Randomized controlled clinical trial

• Objects: Eighteen adult edentulous patients scheduled for elective surgery

• The laryngeal view was assessed under direct laryngoscopy using the percentage of glottic opening (POGO) score

• Three different head and neck positions
  (1) simple head extension – head extension without a pillow
  (2) sniffing position – head extension with an uncompressible pillow of 7 cm
  (3) elevated sniffing position – head extension with an uncompressible pillow of 10 cm

• Statistic Analysis
  - ANOVA (p<0.05)
  - Post hoc analysis with the Bonferroni method (p<0.025)

Results

Table 1. Patient data

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<table>
<thead>
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<tbody>
<tr>
<td>Age (years)</td>
<td>75 (8)</td>
</tr>
<tr>
<td>Gender (M/F)</td>
<td>10/8</td>
</tr>
<tr>
<td>Height (cm)</td>
<td>157.7 (7.6)</td>
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<tr>
<td>Weight (kg)</td>
<td>58.3 (7.7)</td>
</tr>
<tr>
<td>Mallampati score (I/II)</td>
<td>10/8</td>
</tr>
<tr>
<td>Mouth opening (cm)</td>
<td>4.5 (0.8)</td>
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<tr>
<td>Thyromental distance (cm)</td>
<td>7.3 (0.8)</td>
</tr>
</tbody>
</table>

* Data are presented as means (SD) or number of patients.

• A significant difference was observed in the laryngeal views assessed at the three head positions (P=0.001).

• The POGO scores (mean [SD]) in the sniffing position (78.9% [19.7%]) and elevated sniffing position (72.6% [20.8%]) were significantly improved compared to that with simple head extension (53.8% [25.9%]) (P=0.001, respectively). The sniffing position provided the best laryngeal view.

• The mean POGO scores were higher in the sniffing position than the elevated sniffing position, but no significant difference was observed between these two positions (P=0.268).

Conclusion

• The sniffing and elevated sniffing positions provide better laryngeal views during direct laryngoscopy compared to simple head extension in edentulous patients.